

BEST AVAILABLE COPY**REMARKS**

Favorable reconsideration and allowance of the claims of the present application are respectfully requested.

In the present Office Action, Claims 2, 3, 6, 7 and 16 stand rejected under 35 U.S.C. § 112, second paragraph as allegedly indefinite for failing to particularly point out and distinctly claim the subject matter which the applicants regard as their invention. Claims 1-10, 15 and 16 stand rejected under 35 U.S.C. § 112, second paragraph as allegedly incomplete for omitting essential structural cooperative relationships of elements.

In response to the § 112 rejections, applicants have amended Claims 1, 2, 3, 8, 9, 10, 11, 13, 14 and 16. Applicants have also cancelled Claims 7 and 12 in this response. Concerning to the amendment to Claim 1, applicants have amended that claim to positively recite the structural relationships between the claimed elements. Specifically, Claim 1 has been amended to positively recite a structure that includes a bi-layer capping coating on top of a layered substrate that is terminated by a layer including at least one metallic component, each layer of said coating provides adhesion and protection, said bi-layer capping coating comprising a first layer of silicon nitride entirely on said layer including said at least one metallic element and a second layer of an amino silane atop said first layer of SiN₃; and a carrier assembly located atop said bi-layer capping coating. This amended claim includes structural cooperative relations of the elements, and as such, the Examiner's rejection to Claims 1-10, 15 and 16 under 35 U.S.C. § 112, second paragraph, can and should be withdrawn.

Applicants observe that in amending Claim 1 they have included that the layered substrate is "terminated with a layer that includes at least one metallic component". Support for this amendment to Claim 1 is found in Claim 7 which has been cancelled herein as well as at Page 14, paragraph [0054]. Applicants have also amended Claim 1 to positively recite that

BEST AVAILABLE COPY

REMARKS

Favorable reconsideration and allowance of the claims of the present application are respectfully requested.

In the present Office Action, Claims 2, 3, 6, 7 and 16 stand rejected under 35 U.S.C. § 112, second paragraph as allegedly indefinite for failing to particularly point out and distinctly claim the subject matter which the applicants regard as their invention. Claims 1-10, 15 and 16 stand rejected under 35 U.S.C. § 112, second paragraph as allegedly incomplete for omitting essential structural cooperative relationships of elements.

In response to the § 112 rejections, applicants have amended Claims 1, 2, 3, 8, 9, 10, 11, 13, 14 and 16. Applicants have also cancelled Claims 7 and 12 in this response. Concerning to the amendment to Claim 1, applicants have amended that claim to positively recite the structural relationships between the claimed elements. Specifically, Claim 1 has been amended to positively recite a structure that includes a bi-layer capping coating on top of a layered substrate that is terminated by a layer including at least one metallic component, each layer of said coating provides adhesion and protection, said bi-layer capping coating comprising a first layer of silicon nitride entirely on said layer including said at least one metallic element and a second layer of an amino silane atop said first layer of SiN₃; and a carrier assembly located atop said bi-layer capping coating. This amended claim includes structural cooperative relations of the elements, and as such the Examiner's rejection to Claims 1-10, 15 and 16 under 35 U.S.C. § 112, second paragraph, can and should be withdrawn.

Applicants observe that in amending Claim 1 they have included that the layered substrate is "terminated with a layer that includes at least one metallic component". Support for this amendment to Claim 1 is found in Claim 7 which has been cancelled herein as well as

BEST AVAILABLE COPY

at Page 14, paragraph [0054]. Applicants have also amended Claim 1 to positively recite that the bi-layer capping coating includes a first layer of silicon nitride and a second layer of an amino silane. Support for this amendment to Claim 1 is found at Page 14, paragraph [0053]. Applicants further observe that Claim 1 has been amended to positively recite that the carrier layer is located atop bi-layer capping coating. Support for this amendment to Claim 1 is found at Page 15, paragraph [0056]. Applicants further observe that FIG. 2 provides support for the added structural relationships among the elements recited in amended Claim 1.

The amendments made to Claims 2, 3, 8, 9, 10, 11, 13, 14 and 16 are minor in nature and need no further elaboration by the applicants in this Response. Applicants observe that some of these amendments obviate the indefiniteness rejection raised in the present Office Action and, as such, the indefiniteness rejection can and should be withdrawn.

Since the above amendments to the claims do not introduce new matter into the specification of the instant application, entry thereof is respectfully requested.

Claims 1-11 and 13-17 stand rejected under 35 U.S.C. § 102(a) as allegedly anticipated by Applicants' Admitted Prior Art ("AAPA"). Claims 12 and 18 stand rejected under 35 U.S.C. § 103 as allegedly unpatentable over AAPA in view of U.S. Patent No. 5,287,003 to Van Andel ("Van Andel").

Concerning the § 102(b) rejection, it is axiomatic that anticipation under § 102 requires that the prior art reference disclose each and every element of the claim to which it is applied. In re King, 801 F.2d, 1324, 1326, 231 USPQ 136, 138 (Fed. Cir. 1996). Thus, there must be no differences between the subject matter of the claim and the disclosure of the prior art reference. Stated another way, the reference must contain within its four corners adequate direction to practice the invention as claimed. The corollary of the rule is equally applicable:

BEST AVAILABLE COPY

Absence from the applied reference of any claimed element negates anticipation. Kloster Speedsteel AB v. Crucible Inc., 793 F.2d 1565, 1571, 230 USPQ 81, 84 (Fed. Cir. 1986).

Applicants submit that the claims of the present application are not anticipated by AAPA since AAPA does not disclose a structure which includes applicants' claimed bi-layer capping coating comprising a first layer of silicon nitride (SiN) and a second layer of an amino silane that is located between a layered substrate to be transferred that is terminated with a layer that includes at least one metallic component and a carrier assembly.

AAPA, as described in FIG. 1 of the present application, includes capping layer 200 that contains only an amino silane. AAPA does not disclose applicants' claimed bi-layer capping coating that includes a first layer of SiN and a second layer of an amino silane. As such, the claims of the present application are not anticipated by AAPA.

The foregoing remarks clearly demonstrate that the applied reference does not teach each and every aspect of the claimed invention, as required by King and Kloster Speedsteel; therefore the claims of the present application are not anticipated by AAPA. Applicants respectfully submit that the instant § 102 rejection has been obviated and withdrawal thereof is respectfully requested.

With respect to the § 103 rejection, applicants submit that the claims of the present invention are not rendered unpatentable by AAPA and the disclosure of Van Andel, et al. since AAPA and Van Andel, et al. do not teach or suggest applicants' claimed structure. That is, the combination of AAPA and Van Andel, et al. do not teach or suggest a structure that includes a layered substrate for transferring, said layered substrate is terminated with a layer that includes at least one metallic component; a bi-layer capping coating on top of the substrate, each layer of said coating provides adhesion and protection, said bi-layer capping coating comprising a first layer of silicon nitride entirely on said layer including said at least

BEST AVAILABLE COPY

one metallic element and a second layer of an amino silane atop said first layer of SiN; and a carrier assembly located atop said bi-layer capping coating.

AAPA is defective for the reason discussed above with respect to the anticipation rejection. Applicants thus incorporate thus remarks herein by reference. To reiterate: AAPA does not teach or suggest applicants' claimed bi-layer capping coating comprising a first layer of silicon nitride (SiN) and a second layer of an amino silane that is located between a layered substrate to be transferred that is terminated with a layer that includes at least one metallic component and a carrier assembly. AAPA, as described in FIG. 1 of the present application, includes capping layer 200 that contains only an amino silane. No further material layer is said to be present in the prior art capping layer. Applicants observe that stating that capping layer 200 of the prior art may be a few monolayers thick only describes the thickness of the amino silane capping layer of AAPA and does not indicate that the same is comprised of more than one material layer, as presently claimed.

Van Andel, et al. do not alleviate the above defects in AAPA since the applied secondary reference does not teach or suggest applicants' claimed bi-layer capping coating comprising a first layer of silicon nitride (SiN) and a second layer of an amino silane that is located between a layered substrate to be transferred that is terminated with a layer that includes at least one metallic component and a carrier assembly. Specifically, Van Andel, et al. do not teach or suggest a bi-layer capping coating where a SiN layer is located entirely on a layer of a substrate for transferring that comprises at least one metallic component and an amino silane atop the SiN layer.

In Van Andel, et al. (See FIG. 2), the SiN layer 20 is located entirely atop oxide layer 17 and minor end portions of the bond pad 18. The major portions of the bond pad 18 are left exposed and thus Van Andel, et al. do not teach or suggest the claimed bi-layer capping

BEST AVAILABLE COPY

coating since the SiN layer in the prior art structure is not located entirely on the metallic component, i.e., bond pad 18, as is required in the claims of the present application.

Applicants thus observe that in Van Andel, et al. the SiN layer does not provide protection to the metallic component, as presently claimed.

The § 103 rejection also fails because there is no motivation in the applied references which suggest modifying the disclosed structures to include the various elements recited in the claims of the present invention. Thus, there is no motivation provided in the applied references, or otherwise of record, to make the modification mentioned above. "The mere fact that the prior art may be modified in the manner suggested by the Examiner does not make the modification obvious unless the prior art suggested the desirability of the modification." In re Vaeck, 947 F.2d, 488, 493, 20 USPQ 2d. 1438, 1442 (Fed.Cir. 1991).

The rejection under 35 U.S.C. § 103 has been obviated; therefore reconsideration and withdrawal thereof is respectfully requested. Thus, in view of the foregoing amendments and remarks, it is firmly believed that the present case is in condition for allowance, which action is earnestly solicited.

Respectfully submitted,



Leslie S. Szivos
Registration No. 39,394

SCULLY, SCOTT, MURPHY & PRESSER
400 Garden City Plaza, Suite 300
Garden City, New York 11530
(516) 742-4343

LSS:gc